

Mapping a Personalized Learning Journey – K-12 Students and Parents Connect the Dots with Digital Learning



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'All learning begins when our comfortable ideas turn out to be inadequate.' John Dewey

The infiltration of a sweeping range of different technologies into our everyday lives has created an expectation that all interactions should be highly personalized to meet our individualistic needs. The evidence of these expectations is commonplace now and for many, no longer is it a “wonder of technology” surprise. We search online for a recipe for roasted chicken for Sunday dinner and our favorite cooking site serves up recipes that include lemon and fresh herbs but none with mushrooms; it knows what we like. The grocery store provides us with a select set of coupons during checkout, customized just for us based upon our purchases today as well as over the past year; 50 cents off fresh thyme. Our local ATM greets us with a happy birthday message on our special day as we deposit Aunt Sue’s birthday check. Amazon prompts us to take a look at a brand new book on the Baseball Hall of Fame; our buying history includes many baseball history books. Each of these examples understands at its core that “one size never really fits all” and nor do we want it to be that way. Rather, as human beings we relish our individuality and expect that our interactions in the marketplace, with each other and even with our government, will be personalized to our specific needs to support greater efficiency, effectiveness and engagement. Netflix has taught us to expect nothing less as that new George Clooney movie we have been waiting for arrives in our mailbox.

Students, perhaps without even realizing it, are already seeking out ways to personalize their learning. Looking to address what they perceive as deficiencies in classroom experiences, students are turning to online classes to study topics that pique their intellectual curiosity, to message and discussion boards to explore new ideas about their world, or to online collaboration tools to share their expertise with other students they don’t even know. Students now expect in their learning lives the same types of personalized interactions that adults already experience in our everyday lives. Their experience with seeking out their own personalized learning experiences has changed their overall expectations for their education, and not just for the use of technology. Two-thirds of students told us in this year’s Speak Up surveys that they define school success by the achievement of their own personal learning goals, far exceeding traditional marks of success such as school honors or awards (45 percent) or even parent pride (55 percent). These students have an intrinsic understanding that like so many other aspects of their lives, personalization is the key to their own greater engagement in the learning process.

So, even while students have turned to personalized learning on their own time, in their own way, why is it that this revolution of technology that has enabled personalization has not also penetrated our classrooms? Why is it that we are for the most part still educating our children with a model that perpetuates the fallacy of one size fits all? Why is it that technology has transformed the way we shop, bank and interact with each other and not yet had the same impact on teaching and learning, at least as education stands today? But, this may be changing.

The idea of personalized learning is not new. What is new are the collective advancements in technology that now can provide more opportunities to personalize the learning experience for many more students efficiently and effectively. Sir Ken Robinson talks about this paradigm shift to personalized learning as the process of contouring learning to individuals, recognizing that individuals inherently have different strengths and weaknesses, interests and ways of learning. We have long talked about how technology is the great equalizer of opportunity. We now know that technology, in fact, can extend this value proposition around equity to greater personalization of the learning process as well. We sense a similar articulation of this emphasis on personalized learning from parents too. When asked about their biggest concerns regarding their child’s future, 73 percent of parents voiced “learning the right





skills to be successful in the future,” far exceeding parental concerns regarding their child’s financial future (28 percent). Interestingly, this concern about having the “right skills” is held universally by parents, including the parents that completed our Spanish language survey. Parents have high expectations that their child’s school will help to alleviate this concern; that school will adequately prepare their child with the 21st century work place skills that will be required for future success. And thus, we see parents’ strong support of a wide range of technology tools within school and the digital choices they are making for their child’s home technology access. It is not surprising therefore that 87 percent of parents stated that the effective use of technology at school has an important impact on their child’s success, with 50 percent of parents ranking the effective use of technology as extremely important. Parents are connecting the dots that link a digitally-rich environment that provides greater personalization of the learning process for their child to the development of those right skills and thus, their child’s future success.

For the past nine years, the Speak Up National Research Project has endeavored to stimulate new discussions around how technology tools and services can transform education and to provide a context to help educators, parents, and policy and business leaders think beyond today and envision tomorrow. In last year’s report, *“The New 3E’s of Education: Enabled, Engaged, Empowered - How Today’s Students are Leveraging Emerging Technologies for Learning,”* we examined the student articulated vision of socially-based, un-tethered and digital rich learning environments through the lens of students’ aspirations for mobile learning, online learning and e-textbooks. With this year’s report, we continue to gain greater appreciation for the unique student perspective on learning with an in-depth focus on personalized learning experiences and environments. We also examine the parents’ perspectives to understand not only their aspirations for more personalized learning but how they are enabling these learning opportunities as well for their child. And in the second report from this year’s Speak Up National Findings, we will share the educator perspective with new data findings on how teachers, librarians and administrators are personalizing learning with a variety of emerging technology tools and strategies.

This is not the time to be comfortable with our existing ideas but rather to challenge how we can leverage the long held potential of technology to create learning environments in school that match how our students are experiencing the world today. This is the time to learn from the rich experiences that students are having outside of school with social media, online learning and mobile devices, and to use that knowledge to inform new approaches to in school use of such emerging technologies. This is the time to connect the dots and create a shared vision for personalized learning that includes the unique perspectives of our school community including students, parents and educators. This is the time to map new personalized learning journeys that allow every student to self-direct their own path and to use the tools that best fit their needs. What is holding us back today?

Digital Learning Dot #1: Personalizing Learning Outside of School

While education leaders at all levels debate the potential of personalized learning in the classroom to be the silver bullet for transforming the education process, today’s students are already realizing the benefits of such personalization . . . outside of school. For today’s students in our highly connected, information intensive world, learning is a 24/7 enterprise and the traditional school day of 8 to 2:30 is only one small segment of their personal learning day. Students’ access to the Internet, whether at home, at the public library, at Starbucks or at school, has in fact broken the monopoly that traditional education systems have on learning. As we have discussed in past Speak Up reports, many of today’s students are exhibiting the characteristics of what we define as Free Agent Learners.





Who is the Free Agent Learner? Free Agent Learners are students who do not feel that they need to be tethered to traditional education institutions and have confidence in their ability to drive their own educational destiny. They do this by leveraging a wide range of technology tools and services to create personalized learning networks and environments that directly fuel their individual learning passions in a modality that is highly customized to their needs. Unfortunately, many schools do not or cannot provide a learning environment that allows the Free Agent Learner to self-direct a learning path or even choose which technologies to use within the classroom. Thus, we continue to see through the Speak Up data the persistence and expansion of a digital disconnect between students and educators, the gap between how today's students want to use technology for learning and how technology is served up to them in school. By studying how students are personalizing learning outside of school and creating socially-based, un-tethered and digitally-rich learning environments, we can illuminate a new digital road map for in school use.

Use of social media in students' personal lives – so much more than Facebook

Despite students' limited ability to access social media in school, it is interesting to see how students are increasingly tapping into the plethora of social media tools and products to create community, develop skills and organize their lives outside of the classroom.

Table 1: Student use of social media in their personal lives		
Social Media Use	Students – Grades 6-8	Students – Grades 9-12
Maintain a personal social networking site	48%	59%
Participate in online discussion boards, communities, chats	45%	56%
Use web tools for collaborative writing	30%	30%
Use web tools to create alerts or notifications for self-organization	24%	24%
Make videos to share online with others	20%	18%
Contribute to wikis or blogs about their interests	14%	14%

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The explosion in the use of social networking sites by everyone from Grandma to children in day care is well documented in other research and media reports and supported by the Speak Up findings. As indicated in Table 1, almost half of middle school students and more than half of high school students report that they are regularly maintaining and updating their personal profile on a commercial social networking site. One in five students in grades 3-5 also report that they are regularly updating a social networking site of their own, most often on age appropriate and monitored popular sites such as Webkinz or Club Penguin. To simply dismiss student use of these social networking sites as frivolous or even dangerous misses the deeper storyline around the use of social media. Today's generation of students are documentarians with strong interests in analyzing, cataloging and sharing their experiences, insights, opinions and feelings with a broad circle of community in a highly timely manner. They also view the documentation and sharing process as components of a larger personal learning ecosystem. While many of these activities could be executed without technology, students realize that the technological underpinnings of a variety of social media tools provide a highly effective and efficient roadway for building personal networks of





experts and learning about their world. And that interest is not limited to just Facebook. For example, high school student participation in online communities through discussion boards and chats has doubled since 2008, and the student use of collaborative writing tools such as Google Docs™ to develop personal writing skills has increased 57 percent over the same period of time.

DIY learning – how students are personalizing learning outside of school

As evidenced by the data on collaborative writing, students are increasingly approaching their education from a DIY (Do It Yourself) perspective, whether that is driven by interests in academic areas that are not covered in classroom curriculum, a desire to leverage peer or expert knowledge, productivity needs, or concerns they have about the quality of their traditional education to adequately prepare them for the future. Of special note is how the students are first adopting and then, adapting various emerging technologies to support this self-directed learning. For example:

- 1 in 10 students in grades 6-12 have sent out a Tweet about an academic topic that interests them
- 15 percent have informally tutored other students online or found an expert to help them with their own questions
- 18 percent have taken an online assessment to evaluate their own self-knowledge
- One-fifth have used a mobile app to organize their school work
- 1 in 4 have used a video that they found online to help with homework
- 30 percent of middle school students and 46 percent of high school students have used Facebook as an impromptu collaboration tool for classroom projects
- Almost half of the high school students have sought out information online to help them better understand a topic that is being studied in class

Addressing the unmet demand for online learning

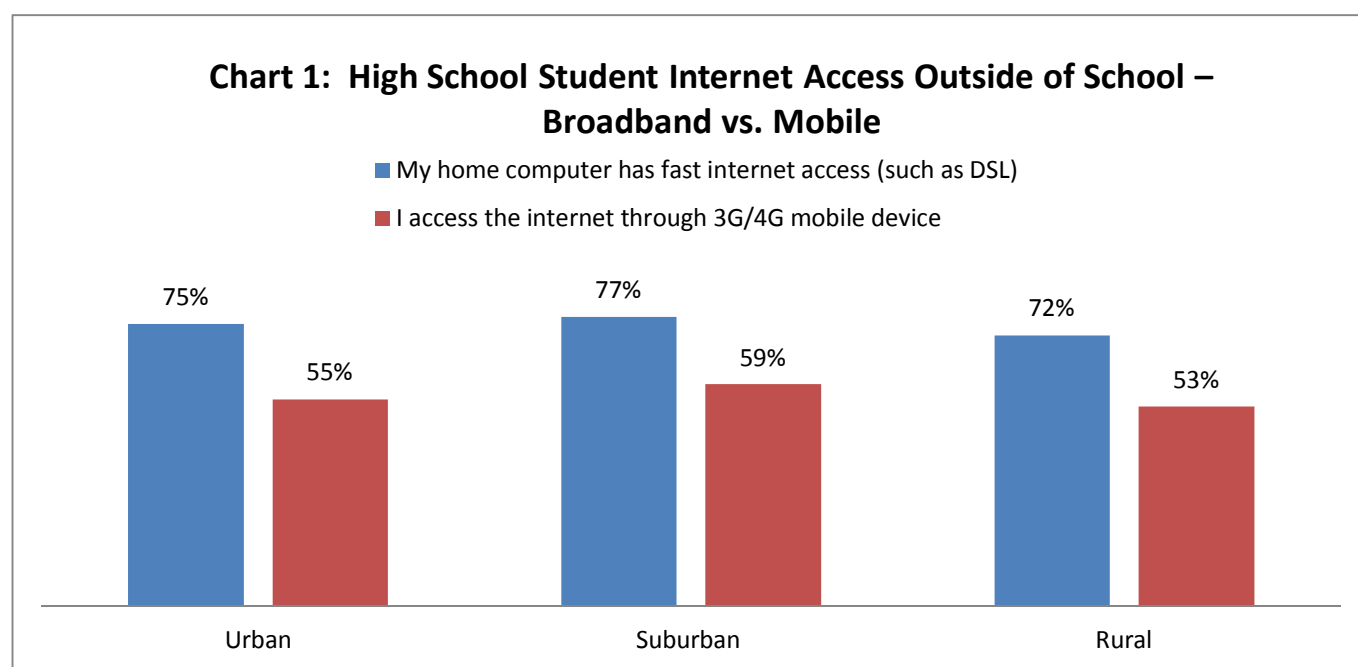
In order to support their DIY learning style, students are increasingly turning to online learning. 12 percent of high school students and 9 percent of middle school students have taken an online class on their own, not school or teacher directed, to support their learning. In most cases, this online class is a supplement to the student's traditional class and quite often the teacher of that traditional class is not even aware of the student's supplemental instruction. Interestingly, this cohort of students who are seeking and taking online classes on their own is similar in size to the percentage of students who are taking online classes directed by their school; 13 percent of high school students report taking either a self-study online class through their school or a teacher-directed online class. Given that 46 percent of students who have not taken an online class say they would like to and the limited capacities that schools have to fulfill this demand, we expect to see a continuing rise in the number of students who are personalizing their education by identifying and participating in online classes outside of school.





Mobile devices open the door to greater personalization

The increased access that students have to the Internet through their mobile devices is proving to be the key to greater personalization of how they learn outside of school. While high speed home Internet access has remained fairly consistent over the past few years with approximately two-thirds of students in grades 6-8 and three-quarters of students in grades 9-12 reporting broadband access at home nationwide. The headline from the Speak Up 2011 results is the tremendous access that students now have to the Internet through mobile devices, be it wireless or 3G/4G access. 45 percent of middle school students and 55 percent of high school students say that their access to the Internet outside of school is now through a wifi or 3G/4G mobile device with approximately 1 in 8 students (12 percent) reporting that their mobile device was provided by their school. Most notably, this mobile access is not limited to only certain communities or populations as demonstrated in Chart 1.



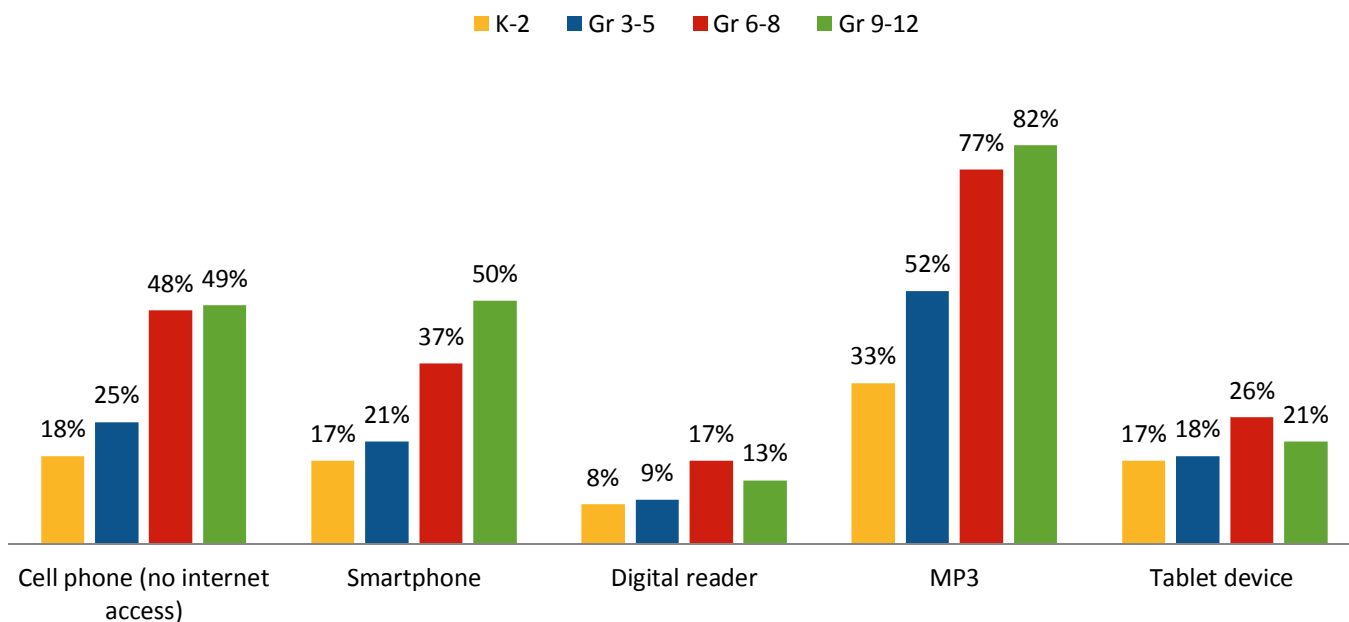
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Access to the Internet via a mobile device appears to be an equal opportunity partner for students where location of home community is not a determinant of significantly more or less access. Just as the Internet has been called the great equalizer of opportunity, the mobile device is quickly becoming the great equalizer of access. Since the first Speak Up surveys for students in 2003, we have polled students on their personal access to mobile devices and other technologies outside of school. Our findings over the past few years have documented the increased numbers of mobile devices in students' pockets and backpacks (cell phones and smartphones in particular) and have closely mirrored those from other research organizations. Many schools and districts have used their data as starting points for new conversations around the role of these technologies within school. With the strong movement towards student access to tablets, we see the landscape for mobile devices unfold yet again.





Chart 2: Students' personal access to mobile devices



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While Chart 2 documents the access that students from kindergarten through 12th grade have to a wide range of devices, the more interesting story is the change in this landscape in just twelve months. Following a trend that started two years ago, there was a 20% decrease from 2010 in high school students reporting that their mobile device is a limited feature cell phone or cell phone without internet access. On the other hand, smartphone access (multi-functional mobiles with Internet access) continues to rise as do the number of students who say they have a digital reader. The most significant increase however is in the tablet category where both middle school and high school student access to a personal tablet doubled from 2010 to 2011. For many students, the tablet device extends the personalization that they like in the smartphone to a new level. The “always on” presence that is facilitated by wireless or 3G/4G connectivity, the depth and variety of features and functions that support the way they live and want to learn, and the multitude of applications (including in education) makes this form and function the new desired platform for personalized learning for today’s students.

Students are already connecting the dots for personalized learning outside of school through their access to mobile devices and their sophisticated use of social media and Internet resources to drive their own self-directed learning. And yet in stark contrast to the richness of their out of school experiences, most students find their in-class experiences to approximate a “one size fits all” model with too much structure and standardization, and too little accommodation of personal learning approaches or the technology tools that enable such approaches. Just as the students continue to push the envelope of technology adoption and adaptation outside of school, they are equally passionate about sharing their ideas for more socially-based, un-tethered and digitally rich learning experiences in class and the need for their schools to create new digital roadmaps for personal learning. Let’s listen and learn from those ideas.





Digital Learning Dot #2: Personalizing Learning at School

We know from our study over the past nine years of student use of technology both in and out of school that students' adoption and adaptation of new technologies in their personal lives often stimulates their use of the same or similar tools in school. For example, in 2003 we documented how students were effectively using email not only for communications but also as a file storage vehicle for school work documents so that they could have ready access to them whether they were at home or at school. Once teachers gained an appreciation for the potential efficacy of using email for that purpose for their own documents, both personally and professionally, teachers' email use increased significantly. Now, many teachers not only regularly communicate with their students via email, but they also accept homework through email as well as school portals. In 2011, students continue to be the “digital advance team” for the rest of us through their early adoption and adaptation of emerging technologies to address academic needs. And such is definitely the case with the use of various technologies to create more personalized learning environments.

Obstacles to using technology at school

As previously discussed, students are leveraging a wide range of emerging technologies outside of school to support their education. And they would like to be able to extend the usage of those same tools into their school day so that they can more fully realize the many benefits of personalized learning in class. Several barriers or obstacles around technology use, however, stand directly in the path of greater in school personalization of the learning process.

Table 2: What prevents you from using technology at your school?		
Obstacles to Tech Use at School	Students – Grades 6-8	Students – Grades 9-12
I cannot use my own mobile device	57%	55%
I cannot access my social networking site	50%	51%
Websites I need for learning are blocked	49%	59%
I cannot use my communications tools	42%	39%
Teachers limit how I can use technology	40%	42%

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Inherent in many definitions of personalized learning is the credo that students should not only be able to direct their own learning path, but also be free to choose the tools they want to use in that pursuit. By limiting the ability for students to choose which technologies they would like to use, be it a social networking site for class collaborations or a tablet computer for note taking, schools are in fact limiting the potential of personalized learning.

A solutions proposal – from the students

The student point of view on how schools could make it easier for them to use technology is very cut and dry: **let me use my own tools**. A majority of middle school students (56 percent) and high school students (59 percent) would like to use their own mobile devices for instructional purposes at school. Even 27 percent of students in grades 3-5 would like to use their own smartphone or tablet at school. Additionally, 41 percent of students in grades 6-12 would like to bring to school a personal laptop and 4 out of 10 students believe that access to their social networking site at school would yield educational benefits. Some students who may be weary of the ongoing digital battles at





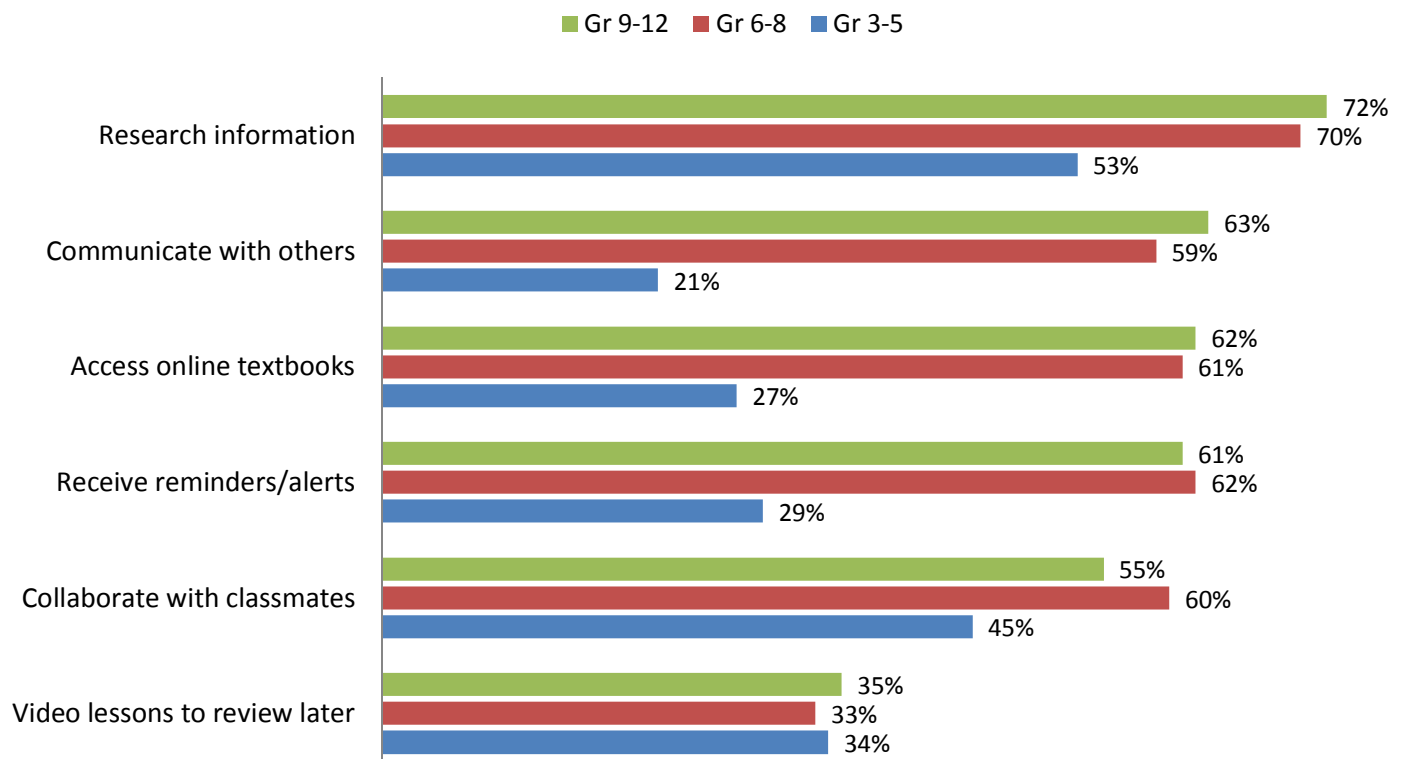
school have taken a different approach: **if you won't let me use my own tools, then provide me with tools and access that replicate my out of school usage.** In addition to “give me greater access to the websites I need to support my schoolwork (70 percent), the students’ wish list includes:

- Unlimited wifi Internet access throughout the school (47 percent)
- Tools to help organize my schoolwork (38 percent)
- Access to the school network from home, school or wherever I may be with my mobile device (37 percent)
- Communications tools to support my interactions with other students and my teachers (36 percent)
- Collaboration tools to work with my classmates on schoolwork projects (32 percent)

As further confirmation of the reality around this pervasive shift to mobility in our technology use, over one-third of students also want their school to provide them with the ability to recharge their mobile devices during the school day . . . even if their school bans those same mobile devices.

Students want to “take it mobile” – so do their parents!

Chart 3: How students would personalize learning through the use of a mobile device at school



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The digital battleground at schools today is definitely playing out around the role of mobile devices. For many educators, the role of technology in personalizing learning is defined as the glue to connect disparate systems; for many students, the mobile device is the embodiment of that glue. It is the one-stop utility player that opens the door to a different kind of learning experience, both in school and out of school. When asked about how they would use a mobile device to support their education, the students' responses echo key components of personalized learning: self-directed, self-paced, self-determinant on technology tools.

Parents' support of the use of mobile devices within instruction has been steadily increasing over the past few years. Some of this is due to parents' increased personal familiarity as "mobilists" themselves; over two-thirds now say they are smartphone users (67 percent). It is also driven however by the strong value that parents place on a more personalized learning environment for their child and a belief that access to a mobile device for learning is a good step in that direction. In 2011, 46 percent of parents agreed that mobile devices provided a way for instruction to be personalized for each student; an increase of 48 percent compared to parents' views in 2009. Similarly, almost half of parents (48 percent) saw mobile devices as a means for extending learning beyond the school day; only about a third of parents held that same view two years ago. And just as the students are envisioning using their smartphone or tablet to video a classroom lesson or lab to review later at home, parents placed high value on their child's ability to leverage that unique mobile functionality as well (57 percent).

There has been a great deal of conversation in the past year about allowing students to use their own personal mobile devices (such as laptops, smartphones and tablets) within instruction. This concept, coined "Bring your Own Technology or Device" (BYOT or BYOD), has caught the imagination of many education leaders for multiple reasons, some financial, some practical, and some based upon the desire to truly create a more personalized learning environment for their students. By incorporating student owned devices within instruction, many education leaders believe that a significant byproduct of this policy change will be increased engagement in learning and increased ownership of the learning process by the student. This BYOD movement is still nascent however. A majority of district administrators do not allow the use of any student owned mobile devices in class (52 percent) and only 10 percent indicated that they have implemented a version of BYOD in their district. And when we asked school site principals about the likelihood of allowing their students to use their own mobile devices for instructional purposes at school this year, 65 percent of principals said that was unlikely, closely mirroring their same response in 2010 (63 percent).

This administrator viewpoint stands in sharp contrast to the views and values of the parents, however. Almost two-thirds of parents (62 percent) say that if their child's school allowed the use of mobile devices for instructional purposes, it is likely that they would purchase such a device for their child to use at school. Additionally, a majority of parents (52 percent) would also purchase a data plan for that device. This view is not the universe of only a few, affluent suburban parents, however. Parents from low-income (Title 1) schools (61 percent) are just as likely to report that they would purchase a mobile device for their child to use for academic reasons as parents in non-Title 1 schools (63%). Parental support of personalizing learning, just as the concern that parents have for their child's future, has strong universal appeal. Both mobile learning as well as online learning provides a way for parents to visualize a new standard for learning that is not "one size fits few", but rather is personalized to the specific needs of their child.





Learning my way, on my time, in my place - the allure of online learning

Just as parents' familiarity with the value proposition for mobile learning has increased with their own personal access to mobile devices, parents' interest in online learning has grown in a similar way. From job training to traffic school, parents are gaining first hand experiences with online classes. A majority of parents (57 percent) say that the opportunity for their child to work at his/her own pace would be the most significant benefit of taking an online class as part of their education. This value proposition around online learning addresses a key parental concern of classroom structures that do not take into account their child's individual needs and academic strengths and weaknesses. Parental interest in online learning translates into an investment recommendation as well. Over one-third of parents say that their school or district should make a greater investment in online classes.

Middle school students echo similar sentiments as their parents in their opinions around the value of online learning. For these students, online learning provides another gateway to a more personalized learning environment where they would direct the learning process, choose the tools they want to use and self-remediate when needed. For example, students report the following benefits of online learning:

- I would be in control of my own learning (52 percent)
- I would be able to work at my own pace (52 percent)
- I would get extra help in a subject that is hard for me (50 percent)
- My technology skills would improve (47 percent)
- It would be easier for me to review class materials as many times as I want (44 percent)
- I would be more comfortable asking my teacher questions (43 percent)

This "learning my way" concept also extends to students' preferences in regards to the use of print or digital text. When reading short articles, 37 percent of high school students say their preference is to read those articles online. But when studying for a test, 39 percent want to use printed materials. Personalization is often situational and even with digital content, students are making highly personalized decisions about the tools they use within learning.

Today's typical math or science class – connecting the dots to STEM careers

It is very clear from the aspirations of students and the values of their parents, that both stakeholder groups are eager to see changes in how education is delivered in their schools. Through both the gateways of mobile devices and online learning, we gain a greater appreciation for how technology can enable and empower a more personalized learning environment for today's students that supports their vision for a socially-based, un-tethered and digitally rich education. But what is the reality in our nation's classrooms, and especially in our math and science classrooms, where the stakes are so high for inspiring the next generation of innovators? How is technology being leveraged to create more personalized learning environments for students and does that classroom environment have an impact on student interest in future STEM careers? As we continue to hear from industry leaders, the gap between the demand for STEM professionals and the number of students who are pursuing careers in the STEM fields is growing each year. It therefore makes sense that this discussion about math classroom instruction is where





the rubber meets the road in regards to the use of technology to create a more personalized learning experience, particularly in math.

To better understand the correlation, we asked middle and high school students to reflect on their own experiences in math and science classrooms and to identify a particular description of a classroom of their most recent math and science education experience. Looking specifically at the findings around traditional classrooms (and excluding the 14% of the students who indicated that they were in an online or blended classroom) the majority of middle and high school students chose one of these three classroom paradigms:

1. Traditional class with teacher directed instruction – lectures, textbook assignments, group projects or labs – 43 percent
2. Traditional class with teacher directed instruction as in #1 above but with some technology used to support instruction – 33 percent
3. Traditional class with a mix of teacher directed instruction and student directed learning and the use of technology tools to support both the teacher and students – 9 percent

The results vividly underscore the ongoing frustration that students have with the use of technology (or more aptly, the lack of use) within their classes in general. Though not focused on evaluating the efficacy of any particular classroom paradigm, the results also point however to the uphill battle that must be waged to create more personalized learning environments, particularly in our nation's science and math classrooms. For three-quarters of the students in grades 6-12, math and science class is still predominantly teacher-centered with little or no opportunities for students to direct their own learning, at their own pace, with their own tools.

Further analysis points to a tie-in with STEM interest development as well. In the past 5 years since we have been polling students on their interest in STEM careers, slightly less than a quarter of high school students each year note a strong interest in pursuing a STEM field; in 2011, that percentage is 23 percent. Interestingly, students' STEM interest correlates with their classroom model. For students in the traditional classroom where the instruction is teacher directed and technology use is minimal or none, only 20 percent of the students express a strong interest in a STEM field. For students in a classroom where instruction is both student -directed as well as teacher directed and technology is used to support both, the percentage of students that indicate a strong interest in STEM jumps to 27 percent.

Given our continuing national self-interest in attracting more students to the STEM fields coupled with the impending implementation of the Common Core Standards and associated assessments in most states, connecting the dots on how to transform the in school learning process through increased personalization enabled by technology takes on a greater urgency.





Digital Learning Dot #3: Personalizing Learning in Math Class

A standard refrain within the Common Core for Mathematical Practices is the importance of developing student capacity around math and supporting student led learning opportunities whenever possible. For some teachers, this represents a major shift in the entire classroom experience – a shift in their role and their relationship with their students, a shift in the delivery of content and instruction, and a shift in how outcomes will be evaluated. Rather than following the “student as empty vessel that needs to be filled” paradigm, the Common Core approach is based on the teacher laying out a specific task and inviting his/her students to dig in and solve the problem using appropriate tools and resources. This shift provides an opportunity for students to develop a conversational context for mathematical thinking and a stronger personal connection with the reasoning process. For each of the eight math standards articulated, there is an inherent and deliberate alignment with the goals of creating more personalized learning environments for students. The use of technology tools and technology-enabled strategies in math class is the key to realizing this shift in math class.

The students’ vision for the ultimate math classroom

With Speak Up 2011, we asked students in grades 3-12 to envision their ultimate math classroom and identify the technology tools and technology-enabled strategies that would be most effective in helping them be successful in math. The tools and strategies that attracted the most attention from the students represent not only the student preference to more personalized learning, but also are closely aligned to the student vision of socially-based, un-tethered and digitally-rich classrooms. Current middle school students will be on the frontlines of this dramatic shift in math instruction over the next few years and so their vision for the ultimate math classroom is especially poignant at this time.

Table 3: Designing the Ultimate Math Class – Students in Grades 6-8 Speak Up!

<p>“Imagine your ultimate math classroom. Which of these would be most effective in helping you be more successful in that class?”</p>		
Socially-based Strategies	Un-tethered Approaches	Digitally-rich Content
Collaborating with classmates on problem solving tasks (49%)	Being able to text or email my teacher with my questions (46%)	Playing online or computer based math games (47%)
Learning from a teacher that I feel I have a connection with (40%)	Using a mobile device to video math lessons to review later (33%)	Using an online textbook that I can access through a mobile device (31%)
Learning from a teacher who is excited about math (38%)	Having access to an online tutor (32%)	Using animations and simulations to help me visualize difficult math concepts (28%)
Using a class blog or wiki to share ideas with my classmates (23%)	Taking an online math class (29%)	Understanding the context of math through a virtual reality environment (23%)
		Using real time data to understand the context of math (21%)

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By listening to the students' perspective, we can also start to visualize in our minds' eye a very different picture of a middle school math class. In this vision of a different kind of learning experience, we also can see many of the key elements of personalized learning at work.

- Students directing their own learning and working with classmates on peer-mentoring and coaching
- A variety of technology tools are supported with opportunities for the students to choose which tool best suits their personal needs
- The relationship between teacher and student is more collaborative than expert driven with the potential for not just differentiated instruction but individualized support
- Learning does not end with the period bell but rather is extended beyond the school day through an online class, tutor or mobile device

Connecting the dots, however, between this visionary illustration of a new kind of math classroom and the real world implementation in a real school is dependent upon several factors. One of those key factors is the extent that the school or district community of stakeholders (students, parents and educators) shares a common vision for leveraging technology to increase student achievement and teacher productivity.

Digital Learning Dot #4: Creating a Shared Vision for Personalized Learning

Technologies to enable more personalized learning

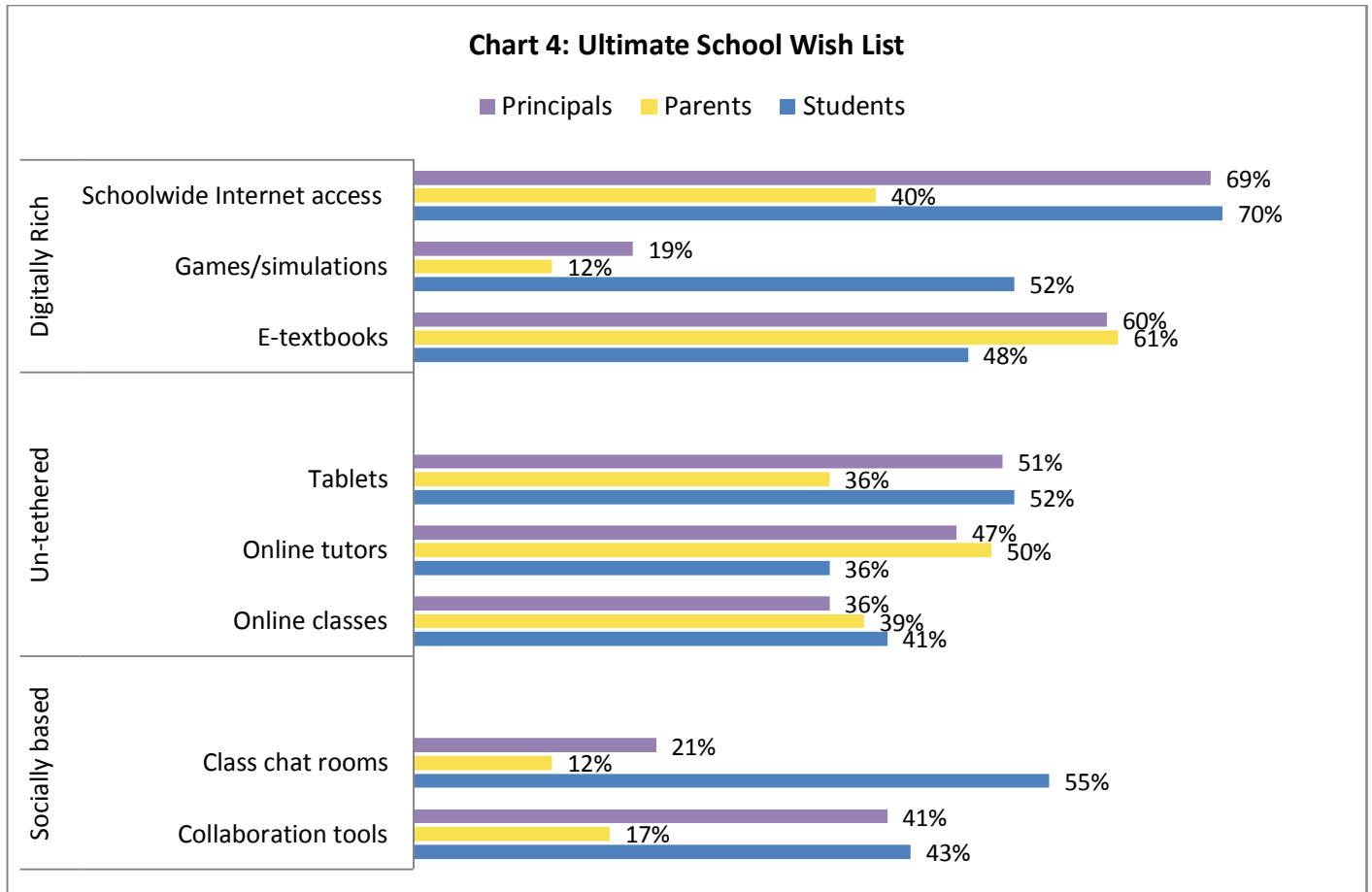
To provide insights into creating a shared vision, it is helpful to first understand the value proposition held by the various members of the community regarding different technology tools that could enable more personalized learning. Each year with Speak Up, we ask students, teachers, parents, principals and district administrators to select the technologies that they believe hold the greatest potential for impacting learning. This list could be viewed as a *dream team* of emerging technologies for learning. But rather than just providing a wish list, the ultimate school findings provide a unique opportunity for schools, districts, states and the nation to answer the question “are we all on the same page with our vision for learning?” This is an especially meaningful exercise when we examine specific technologies that hold great potential for enabling more personalized learning. Following the lead with the ultimate math classroom, we examine the viewpoints of middle school students, parents and principals on certain technologies in Chart 4. As you can see, while we have some work to do to create a truly shared national vision that will marry the views of students, parents and educators, there are some leverage points where the value propositions of certain technology tools or services are similar for different stakeholders. These points of alignment provide an excellent opportunity for schools, districts and communities to instigate new conversations and develop a new digital road map that supports personalized learning environments.





Chart 4: Technologies to Enable More Personalized Learning - Views of Middle School Stakeholders

*“Imagine you are designing the ultimate school.
Which of these tools would have the greatest positive impact on your learning?”*



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While connecting the dots to create more personalized learning environments is not simply about implementing technology, the potential of many of these emerging technologies to be a catalyst for change or to enable a different teaching modality, both in and out of school, is significant. The shared views held by students and parents on the value of online classes, for example, that allow students to work at their own pace opens the door for new discussions that go beyond differentiated instruction and focus on competency assessments and/or intelligent adaptive learning software. The shared views of students and principals on the potential of school wide Internet access, collaboration tools and tablets more accurately reflects how students are leveraging these tools outside of school, but needs to be more fully articulated to assuage the continuing fears that parents hold regarding Internet access. And since these middle school students already see the value of games, simulations and class chat rooms as critical to implementing their vision for learning, parents and administrators may need to suspend their own paradigms around the use of these non-traditional tools and others that students are using outside of school to better appreciate the potential value for education.





Connecting the dots – mapping a personalized learning journey

When one starts out on a journey, a few things are given – you have a starting location and you have a desired ending location. You also may have a map to guide you as you travel and to ensure that your path is efficient. However, fundamentally, the journey is yours and you reserve the right to personalize that journey with random stops or side trips to explore new interests. You may also decide along the way to adjust your travel pace and spend more time here or there. Your mode of transportation for this journey is also a personal choice - by air, by train, by car, by foot or whatever manner best fits your travel style. And while you are journeying from here to there connecting the dots on your map, so are many other travelers, each mapping their own personalized path.

Today's students are on a learning journey. And like our traveler, they too want the opportunity to personalize their journey – to set the pace of learning, to self-direct their path, and to choose the mode of educational exploration that best fits their style and interests. With the collective advancements in technology, our schools have the potential to provide all students with more personalized learning journeys. It was our goal in this year's Speak Up National Report on the 2011 findings from K-12 students and parents to provide new insights into how schools can take advantage of this incredible opportunity to transform learning through technology enabled personalization. In our second report we will examine the unique perspectives of teachers, librarians and administrators as they connect the dots to map new personalized learning journeys for themselves as well as their students. Journey on!



About the Speak Up National Research Project and Speak Up 2011

Speak Up is a national initiative of Project Tomorrow, the nation's leading education nonprofit organization dedicated to the empowerment of student voices in education. Each year, the Speak Up National Research Project polls K-12 students, parents and educators about the role of technology for learning in and out of school. This survey represents the largest collection of authentic, unfiltered stakeholder voice on digital learning. Since fall 2003, over 2.6 million K-12 students, parents, teachers, librarians, principals, technology leaders and district administrators have shared their views and ideas through Speak Up. K-12 educators, higher education faculty, business and policy leaders report that they regularly use the Speak Up data to inform federal, state and local education programs.

In fall 2011, Project Tomorrow surveyed 330,117 K-12 students, 44,006 parents, 36,477 teachers, 2,025 librarians, 814 district administrators, 3,319 school administrators representing 5,616 public and private schools from 1,250 districts. Schools from urban (24 percent), suburban (41 percent) and rural (35 percent) communities are represented. Over one-half of the schools that participated in Speak Up 2011 are Title I eligible (an indicator of student population poverty). The Speak Up 2011 surveys were available online for input between October 10th and December 23rd 2011.

The Speak Up surveys included foundation questions about the use of technology for learning, 21st century skills and schools of the future, as well as emerging technologies (online learning, mobile devices and digital content), science instruction and STEM career exploration. In addition, educators shared the challenges they encounter integrating technology into their schools and districts and how budget challenges have impacted these decisions. The data results are a convenience sample; schools and districts self-select to participate and facilitate the survey-taking process for their students, educators and parents. Any school or school district in the United States is eligible to participate in Speak Up. In preparation for data analysis, the survey results are matched with school level demographic information, such as Title I, school locale (urban, rural and suburban), and ethnicity selected from the Core of Common Data compiled by the National Center for Education Statistics (<http://nces.ed.gov/>). Speak Up data are cross-consulted with NCES statistics to ensure that data represent nation-wide school demographics. The data is analyzed using standard cross-tab analysis. Key variables (such as internet and device access) are tested for statistical significance.



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About Project Tomorrow

Project Tomorrow® is the nation's leading education nonprofit organization dedicated to the empowerment of student voices in education. With 16 years experience in the K-12 education sector, Project Tomorrow regularly provides consulting and research support about key trends in K-12 science, math and technology education to school districts, government agencies, business and higher education.

The Speak Up National Research Project annually polls K-12 students, parents and educators about the role of technology for learning in and out of school and represents the largest collection of authentic, unfiltered stakeholder voice on digital learning. Since 2003, over 2.6 million K-12 students, parents, teachers, librarians, principals, technology leaders and district administrators have shared their views and ideas through Speak Up.

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